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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,306	11/26/2003	In-Sik Nam	GP-303311	8828

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EXAMINER

JOHNSON, CHRISTINA ANN

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,306

Applicant(s)

NAM ET AL.

Examiner

Christina Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 16, 18, 19 and 21-34 is/are rejected.
- 7) ☒ Claim(s) 13, 15, 17 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 32 recites the limitation "wherein said zeolite carrier has a silicon/aluminum mole ratio of from about 14 to about 30." This limitation renders the claim indefinite because claim 29, upon which claim 32 is dependent, recites a silicon/aluminum mole ratio of from about 31 to about 95. Therefore, it is not clear what range is intended for claim 32 because the recited range is outside of the range previously claimed in claim 29.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 29-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasahara et al.

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Kasahara et al. (US 5,270,024) discloses a catalyst composition comprising a zeolite having a molar ratio of silica to alumina of 10-200 which has been ion exchanged with copper (column 3, lines 3-40). The amount of copper taught by the reference would meet the instantly claimed amounts. Refer to column 3, line 68 – column 4, line 15).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Kasahara et al.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12, 14, 16, 18, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosback.

Rosback (US 3,755,153) discloses a catalyst composition comprising a copper exchanged zeolite X (column 2, lines 15-22). The reference teaches that the composition is prepared by contacting a zeolite X with an aqueous solution of a copper salt at a temperature of 15-50 degrees C to effect ion exchange, followed by washing, drying, and calcination (column 9, lines 5-20). In an example, copper nitrate is used and the exchange is conducted at 25 degrees C (Example 1). The amounts of materials taught by the reference would meet the instantly claimed amounts.

The difference between the reference and the claims is that the reference does not teach an ion exchange temperature of "about 14 degrees C" although the reference

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does teach temperatures of 15-50 degrees C. It is the position of the examiner that the recitation "about 14 degrees C" would encompass temperatures slightly higher than 14 degrees, including 15 degrees taught by the reference. It is the examiner's position that the amounts in question are so close that it is prima facie obvious that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. v. Banner*, 227 USPQ 773.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-11 and 22-28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Baacke et al.

Baacke et al. (US 5,116,586) discloses a catalyst composition comprising a zeolite containing 0.2-5.2% by weight copper (column 3, lines 20-35). Suitable zeolites include mordenite having a silica to alumina molar ratio of 10-30 (column 4, lines 5-10).

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Example 4, Table 2 details the preparation of a catalyst containing 2.6 weight % of copper. It is taught that the catalyst is used in the purification of exhaust gases by mixing the exhaust gas with ammonia at elevated temperatures in the presence of the catalyst (column 1, lines 5-15). Suitable temperatures include 200-600 degrees C and a space velocity of 1,000-60,000 h⁻¹ (column 3, lines 25-35).

The product by process limitations recited throughout the claims are noted by the examiner. The disclosed product and the instantly claimed product appear to be essentially the same, comprised of the same components, i.e. a copper exchanged zeolite, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims as opposed to the product taught by the prior art, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

11. Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miura et al.

Miura et al. (US 5,427,753) discloses a catalyst composition comprising a zeolite having a molar ratio in the range of 15-200 and an active metal such as copper (column 1, lines 5-20 and column 3, lines 25-30). The amounts of materials taught by the

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reference would meet the instantly claimed amounts. It is taught that the copper is loaded by ion exchange (column 3, lines 35-40). A salt solution of the active metal, such as copper chloride, nitrate, sulfate, or acetate is contacted with the zeolite at a temperature in the range of room temperature to 100 degrees C (column 3, lines 40-63). Refer also to the examples.

The product by process limitations recited throughout the claims are noted by the examiner. The disclosed product and the instantly claimed product appear to be essentially the same, comprised of the same components, i.e. a copper exchanged zeolite, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims as opposed to the product taught by the prior art, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

12. Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rosback.

Rosback (US 3,755,153) discloses a catalyst composition comprising a copper exchanged zeolite X (column 2, lines 15-22). The reference teaches that the composition is prepared by contacting a zeolite X with an aqueous solution of a copper

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salt at a temperature of 15-50 degrees C to effect ion exchange, followed by washing, drying, and calcination (column 9, lines 5-20). In an example, copper nitrate is used and the exchange is conducted at 25 degrees C (Example 1). The amounts of materials taught by the reference would meet the instantly claimed amounts.

The product by process limitations recited throughout the claims are noted by the examiner. The disclosed product and the instantly claimed product appear to be essentially the same, comprised of the same components, i.e. a copper exchanged zeolite, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims as opposed to the product taught by the prior art, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Allowable Subject Matter

13. Claims 13, 15, 17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed July 15, 2005 have been fully considered but they are not persuasive.

With respect to the rejections under 35 USC 102, or in the alternative, 35 USC 103, over the Baacke et al., Miura et al., and Rosback references, applicant argues generally that the references do not disclose the claimed process limitations. However, the claims subject to this rejection are product claims or processes of using a product by process. As discussed above, the product by process limitations have been noted. However, it has been held that even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. See *In re Thorpe*, 227 USPQ 964.

Once the examiner provides a rationale tending to show that the claimed product appears to be the same or only slightly different from that of the prior art, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the product of the prior art. Applicant has not met this burden. There has been no showing that the product instantly claimed differs structurally or in any way, by virtue of its process of making, from the product taught by the prior art.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

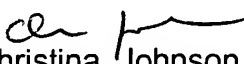
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christina Johnson
Primary Examiner
Art Unit 1725

9/20/05

CAJ
September 20, 2005